

REMARKS

Prior to the present amendment, claims 1-6, 8-56, and 59-101 were pending. Claims 12-51 and 63-101 are withdrawn. By the present amendment, applicant has amended claim 52. No new matter has been introduced by these amendments. Accordingly, claims 1-6, 8-56, and 59-101 are under examination.

Double patenting

On page 2 of the office action, the examiner maintains the non-statutory double patenting rejection. The examiner has indicated in the office action of 09-July-2008 that a terminal disclaimer may be filed to overcome the rejection. Once patentable subject matter is determined, applicants will submit a terminal disclaimer, if required.

Rejection under 35 U.S.C. § 112, first paragraph- new matter

The examiner rejects claims 52-56 and 59-62 as allegedly containing new matter. Applicants respectfully disagree.

Merely to expedite prosecution, Applicants have amended independent claim 52 to recite "A method of generating an immune response in a mammalian host against A β peptide..." The specification discloses immunogenic studies using the A β 1-7 peptide antigen covalently associated with a CT-A comprising a mutation at amino acid 29. See, for example, page 35, lines 29 to page 38, line 35, of the specification as filed, which discloses parenteral immunogenicity studies using the complex, and page 39, line 1 to page 42, line 3, which discloses mucosal immunogenicity studies. Both of these examples list peptide-specific IgG endpoint titers. "For example, in response to both parenteral and intranasal immunization, antibody titers specific for the conjugated antigens were higher than those from the sera of mice immunized with adjuvanted CRM₁₉₇ conjugates after only a single immunization." (page 12, lines 25-32, of the specification as filed). As explained in the specification, "Immunogenicity is defined as the ability to induce a humoral and/or cell-mediated immune response." See page 19, lines 21-22.

Accordingly, the claims do not incorporate new matter. Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection under 35 U.S.C. § 112, first paragraph- written description

On page 5 of the office action, the examiner rejects claims 52-56 and 59-62. The examiner acknowledges on page 7 of the office action that the specification describes immunogenicity studies.

Merely to expedite prosecution, Applicants have amended independent claim 52 to recite "A method of generating an immune response in a mammalian host against A β peptide..." The specification discloses immunogenic studies using the A β 1-7 peptide antigen covalently associated with a CT-A comprising a mutation at amino acid 29. See, for example, page 35, lines 29 to page 38, line 35, of the specification as filed, which discloses parenteral immunogenicity studies using the complex, and page 39, line 1 to page 42, line 3, which discloses mucosal immunogenicity studies. Both of these examples list peptide-specific IgG endpoint titers. "For example, in response to both parenteral and intranasal immunization, antibody titers specific for the conjugated antigens were higher than those from the sera of mice immunized with adjuvanted CRM₁₉₇ conjugates after only a single immunization." (page 12, lines 25-32, of the specification as filed). As explained in the specification, "Immunogenicity is defined as the ability to induce a humoral and/or cell-mediated immune response." See page 19, lines , lines 21-22.

Accordingly, the specification as filed supports the claims. Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection under 35 U.S.C. § 103

On page 9 of the office action, the examiner rejects claims 1-5, 8-11, 52-56, and 59-62 as allegedly being unpatentable over Jobling et al., (WO2000/18434) in view of Agren et al. (J. of Immunol. 1999. 162(2):2434-2440), and Frenkel et al. (PNAS 2000, 97(21):11455-11459).

Applicants respectfully disagree. The claims recite an immunogenic composition comprising a cholera holotoxin (CT) covalently associated to an A β peptide, wherein the CT comprises an A subunit having a mutation. Agren teaches that it is not important to use a mutated cholera holotoxin, which is in direct contrast to the claimed invention. Agren specifically states "Whereas others have separated adjuvanticity from toxicity by disrupting the enzymatic activity of the A1 subunit by site-directed mutagenesis...we have constructed a non-toxic molecule that combines the full enzymatic activity of the A1 subunit...in a gene fusion protein, the...adjuvant." (Agren Abstract). Accordingly, one skilled in the art has no reason to

combine the teachings of a gene fusion protein as an adjuvant from Agren with the teachings of Jobling, which allegedly teaches a mutated cholera holotoxin. The Frankel reference fails to rectify the apparent conflicting teachings of Agren and Jobling. See also MPEP § 2143. Accordingly, the cited art references in combination fail to teach one skilled in the art to arrive at the claimed invention. Applicants respectfully request reconsideration and withdrawal of the claimed invention.

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In view of the foregoing discussion, applicants submit that the present application is in condition for allowance. Reconsideration and allowance are respectfully requested.

If a telephone conference would advance prosecution of this application, the Examiner is invited to telephone the undersigned at .

Respectfully submitted,

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